## WHAT IS CLAIMED IS:

A method for the prevention and/or
treatment of a disease or disorder in which use of growth hormone is beneficial, comprising administering to a patient in need thereof a therapeutically effective amount of a poly(ethylene glycol)-modified hGH having the structure of formula
I or II,

Formula I

or

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## Formula II

wherein

n is an integer between 1 and 10;

m is an integer between 1 and 10;

R is human growth hormone or methionyl growth hormone,

alone or in combination with another therapeutic agent, wherein said disease or disorder in which use of growth hormone is beneficial is selected from the group consisting of Erectile dysfunction, HIV lipodystrophy, Fibromyalgia, Osteoporosis, Memory disorders, Depression, Crohn's disease, Skeletal

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dysplasias, Traumatic brain injury, Subarachnoid haemorrhage, Noonan's syndrome, Down's syndrome, Idiopathic short stature (ISS), End stage renal disease (ESRD), Very low birth weight (VLBW), Bone marrow stem cell rescue, Metabolic syndrome, Glucocorticoid myopathy, Short stature due to glucocorticoid treatment in children, and Failure of growth catching for short premature children.

10 2. The method of claim 1, wherein said disease or disorder in which use of GH is beneficial is selected from the group consisting of idiopathic short stature, very low birth weight, traumatic brain injury, metabolic syndrome, and Noonan's syndrome.

3. The method of either claim 1 or 2, wherein n equals 4 and m equals 3.

- 4. The method of claim 3, wherein said poly(ethylene glycol)-modified hGH is having the structure of formula I with n equals 4 and m equals 3.
- 5 The method of claim 1, wherein said human 25 growth hormone comprises the amino acid sequence of SEQ ID NO:1.
- 6. The method of claim 5, wherein greater than 90% of said polyethylene glycol is conjugated to an amino-terminal phenylalanine of the amino acid sequence of SEQ ID NO:1.
  - 7. The method of claim 6, wherein greater than 95% of said polyethylene glycol is conjugated to an amino-terminal phenylalanine of the amino acid sequence of SEQ ID NO:1.

- 8. The method of claim 1, wherein each mPEG has a molecular weight of about 20 kDa.
- 9. A composition comprising the human growth hormone-PEG conjugate of formula I or II in combination with another therapeutic agent, and at least one pharmaceutically acceptable carrier.

Formula I

or

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## Formula II

wherein

n is an integer between 1 and 10;

m is an integer between 1 and 10;

 $\ensuremath{\mathtt{R}}$  is human growth hormone or methionyl growth hormone.

10. The composition of claim 9, wherein said poly(ethylene glycol)-modified hGH is having the structure of formula I with n equals 4 and m equals 3.